

In the claims:

1. (currently amended) A magnetic sensor arrangement, having

- magnetically sensitive sensor elements (7, 8) whose electrical properties are changeable as a function of a magnetic field that a moving, passive transmitter element (11) is able to influence, with the magnetic field being substantially perpendicular to the sensor elements (7, 8),

wherein

- the magnetic sensor arrangement (1) has two sensor elements (7, 8) in a gradiometer arrangement that are each respectively associated with one of two regions (4, 5) of a permanent magnet embodied in the form of a gap magnet (2), which regions are spaced apart from each other by a predetermined distance (sa),
- the sensor elements (7, 8) are arranged one after the other in a direction of movement of the transmitter element (11),
- the sensor elements (7, 8) are associated with edges of a gap (21) in a rotary direction of the transmitter element,
- the magnetic regions (4, 5) and the permanent gap magnet (2; 20)
- in terms of the dimensions (h, b, t), the gap width (sa), the gap depth (st), and their positions in relation to the sensor elements (7, 8) – are situated so as to minimize the offset of the output signal of the sensor

elements (7, 8) in the gradiometer arrangement.

2. (original) The magnetic sensor arrangement as recited in claim 1,

wherein

- the gap (21) has a contour with a wedge-shaped narrowing in the direction of the gap depth (st) of the permanent gap magnet (20; 23).

3. (original) The magnetic sensor arrangement as recited in claim 1,

wherein

- the gap of the permanent gap magnet (2) has a rectangular contour.

Claim 4 cancelled.

5. (previously presented) The magnetic sensor arrangement as recited in claim 1,

wherein

- flux-conducting plates (9, 10) are positioned between the sensor elements (7, 8) and the magnetic regions (4, 5).

6. (currently amended) The magnetic sensor arrangement as recited in claim 5,
wherein

- each of the flux-conducting plates (24) is embodied in the form of a compact element into which the gap (21) is integrated.

Claim 7 cancelled.

8. (previously presented) The magnetic sensor arrangement as recited in claim 1,

wherein

- the magnetic sensor arrangement (1) is used to detect the rotation angle of a wheel (11) serving as the transmitter element, and the circumference of the wheel (11) is provided with teeth (12) in order to influence the magnetic field in the region of the magnetic sensor arrangement (1).

9. (original) The magnetic sensor arrangement as recited in claim 8,

wherein

- the wheel (11) is embodied in the form of a steel wheel.

10. (previously presented) The magnetic sensor arrangement as recited in claim 1,
wherein

- the sensor elements (7, 8) are magnetoresistive XMR sensors.